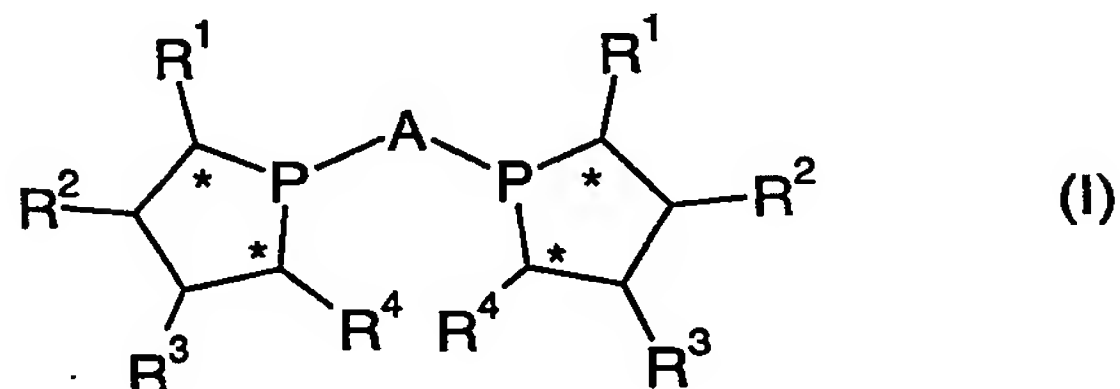


Claims:

1. Process for preparing enantiomerically enriched compounds of the general formula (I),



where

* indicates a stereogenic centre,

R^1 and R^4 are each, independently of one another

(C_1 - C_8)-alkyl, HO-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkoxy,

(C_2 - C_8)-alkoxyalkyl, (C_6 - C_{18})-aryl, (C_7 - C_{19})-aralkyl,

(C_1 - C_8)-alkyl-(C_6 - C_{18})-aryl, (C_3 - C_8)-cycloalkyl,

(C_1 - C_8)-alkyl-(C_3 - C_8)-cycloalkyl,

(C_3 - C_8)-cycloalkyl-(C_1 - C_8)-alkyl,

R^2 and R^3 are each, independently of one another, H,

(C_1 - C_8)-alkyl, HO-(C_1 - C_8)-alkyl, (C_1 - C_8)-alkoxy,

(C_2 - C_8)-alkoxyalkyl, (C_6 - C_{18})-aryl, (C_7 - C_{19})-aralkyl,

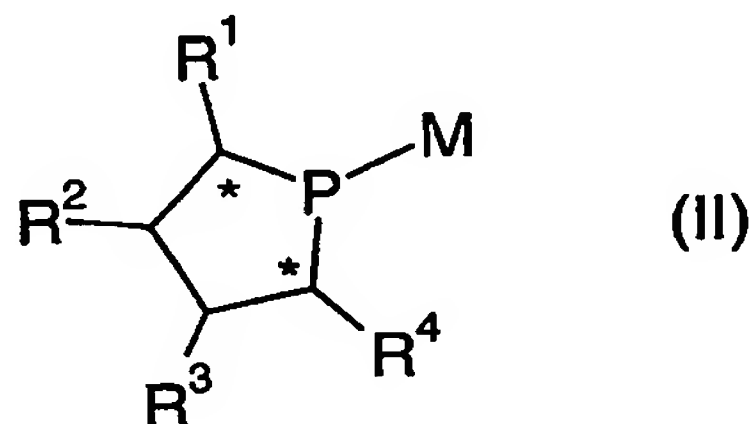
(C_1 - C_8)-alkyl-(C_6 - C_{18})-aryl, (C_3 - C_8)-cycloalkyl,

(C_1 - C_8)-alkyl-(C_3 - C_8)-cycloalkyl,

(C_3 - C_8)-cycloalkyl-(C_1 - C_8)-alkyl,

A is a C_2 bridge in which two carbon atoms have sp^2 hybridization,

by reacting compounds of the general formula (II),



where

R^1 to R^4 can be as defined above,

M is an alkali metal or a trimethylsilyl group,

with compounds of the general formula (III),

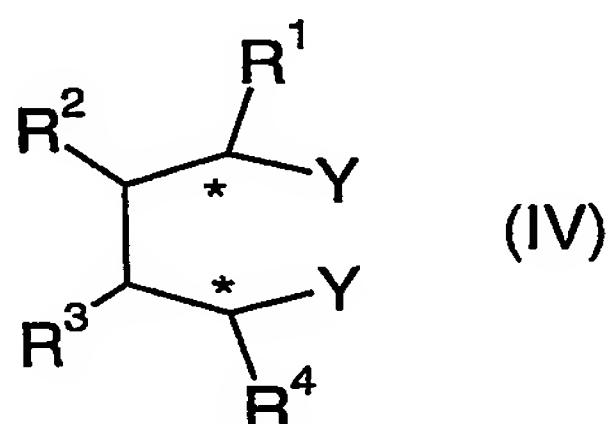


where

A is as defined above and

5 the radicals X are each, independently of one another,
a nucleofugic leaving group,
characterized in that the compounds of the general
formula (II) are prepared by reacting compounds of the
general formula (IV),

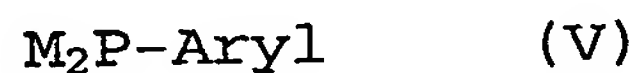
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where

R¹ to R⁴ are as defined above and

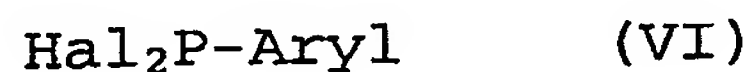
15 the radicals Y are each, independently of one another,
a nucleofugic leaving group,
with compounds of the general formula (V),



20

where

M is an alkali metal and Aryl is a (C₆-C₁₈)-aryl or
(C₁-C₈)-alkyl)₁₋₃-(C₆-C₁₈)-aryl radical, and
subsequently with an alkali metal and, if appropriate,
additionally with trimethylsilyl chloride,
25 with the compounds of the formula (V) being obtained
by reaction of compounds of the general formula (VI),

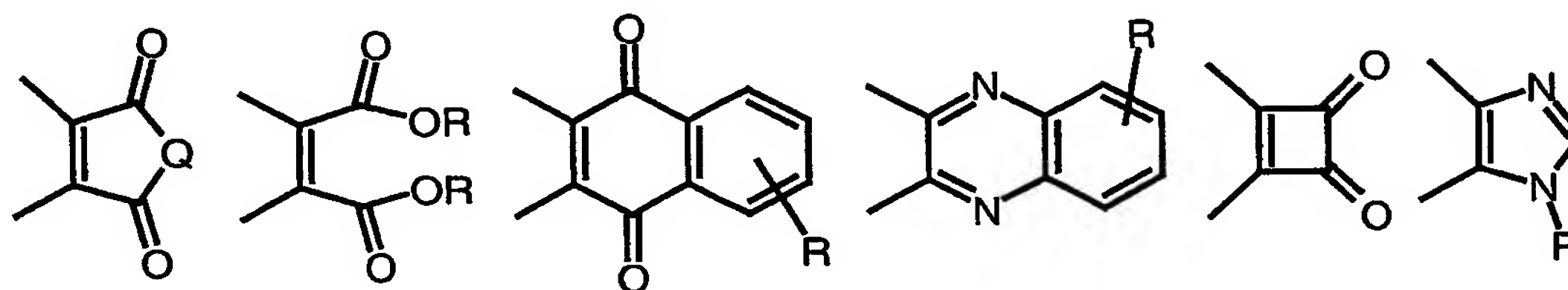


where

Aryl is as defined above,
with an alkali metal.

2. Process according to Claim 1,
characterized in that

A is a radical from the group consisting of



where

R is H, (C₁-C₈)-alkyl, (C₆-C₁₈)-aryl, (C₇-C₁₉)-aralkyl,
(C₁-C₈)-alkyl-(C₆-C₁₈)-aryl, (C₃-C₈)-cycloalkyl,
(C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,
(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,
Q is O, NH, NR.

3. Process according to Claim 2,
characterized in that

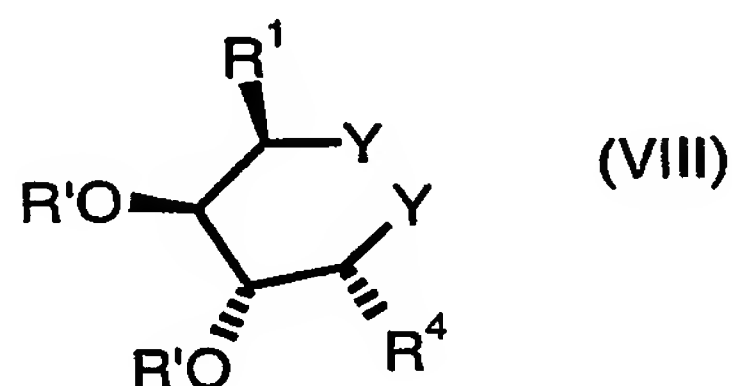
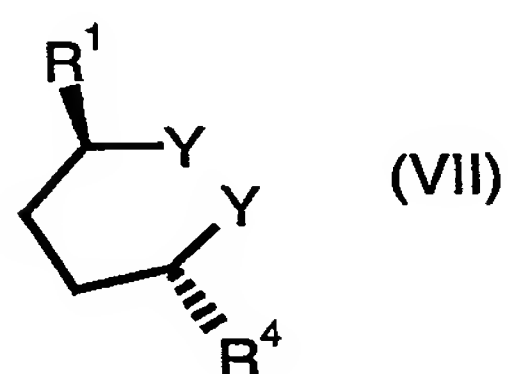
Q is oxygen or NR, where R can be (C₁-C₈)-alkyl,
(C₆-C₁₈)-aryl, benzyl.

4. Process according to Claim 3,
characterized in that

Q is oxygen or NR, where R can be methyl, ethyl,
propyl, isopropyl, tert-butyl, phenyl, naphthyl,
fluorenyl, benzyl.

5. Process according to one or more of Claims 1 to 4,
characterized in that
compounds of the formula (IV) in which R² and R³ are
each H and R¹ and R⁴ are each, independently of one
another, (C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl,
(C₂-C₈)-alkoxyalkyl are used.

6. Process according to one or more of Claims 1 to 5,
characterized in that
compounds of the general formula (III) or (IV) in
which X or Y is selected from the group consisting of
halogen, OTos, OMes, triflate, nosylate, are used.
7. Process according to one or more of Claims 1 to 6,
characterized in that
compounds of the general formula (VII) or (VIII),



where

the radicals Y are selected independently from the
group consisting of halogen, OTos, OMes, triflate,
nosylate,

R¹ and R⁴ are each, independently of one another,
(C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl, (C₂-C₈)-alkoxyalkyl,
(C₆-C₁₈)-aryl, (C₇-C₁₉)-aralkyl,
(C₁-C₈)-alkyl-(C₆-C₁₈)-aryl, (C₃-C₈)-cycloalkyl,
(C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,
(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,

the radicals R' are each, independently of one
another,

H, (C₁-C₈)-alkyl, HO-(C₁-C₈)-alkyl, (C₆-C₁₈)-aryl,
(C₇-C₁₉)-aralkyl, (C₁-C₈)-alkyl-(C₆-C₁₈)-aryl,
(C₃-C₈)-cycloalkyl, (C₁-C₈)-alkyl-(C₃-C₈)-cycloalkyl,
(C₃-C₈)-cycloalkyl-(C₁-C₈)-alkyl,

are used for compounds of general formular (IV).

8. Process according to Claim 7,
characterized in that
R' is H, methyl, ethyl, propyl, isopropyl, tert-butyl,

phenyl, and

R¹ and R⁴ are each methyl, ethyl, propyl, isopropyl, tert-butyl, phenyl.

- 5 9. Process according to one or more of the Claims 1 to 8, characterized in that the alkali metal used is lithium.
- 10 10. Process according to one or more of Claims 1 to 9, characterized in that the reaction of compounds of the general formula (VI) with alkali metals is carried out in an aprotic polar solvent.
- 15 11. Process according to one or more of Claims 1 to 10, characterized in that the reaction of the compound (IV) with the compound (V) is carried out at a temperature of from -25°C to +40°C.
- 20 12. Process according to one or more of Claims 1 to 6, characterized in that the reaction of compounds of the general formula (VI) with alkali metals is carried out at temperatures of -10°C to +10°C.
13. Process according to Claim 1, characterized in that the reaction is carried out in a one-pot variant.